

K2_RK3399 Upgrade Guide

V1.0





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	TYPE	N #	ENTS	
04/12/2023	Major	1.0	Initial version	Li

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1. Debian on the K2-RK3399

K2-RK3399 currently supports the system: Debian9.

2. Installing Debian9

2.1 Installing the image from a Host-pc

2.1.1 Installation prerequisites

- USB-USB data cable
- Host PC
- K2-RK3399 Board
- 12V Power supply
- Windows 64bit

2.1.2 Step1. Download the Debian images and Tools from the below website

Debian images:

rk3399-debian_RKE200620-k2_hwV1.1_XXXXXX.tar.gz

Download link:

Tools: RKDevTool_Release_v2.61.zip (Included in images)

Driver: DriverAssitant_v4.8.zip

Download link:

https://mega.nz/file/qoVlCKgZ#HiKDzY3Lc3PVeoaqzmMfC6mxun30uGByl8WOOOPL

<u>EQU</u>

2.1.3 Step 2. Setting up the burn environment

Download the ADB from below website:

https://mega.nz/file/3tt2yail#eh7xioimmVkEjCNKiSHMuvWC3d4v8JDaGjUSaZyLToQ

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The burning process requires the computer to install ADB and configure environment

variables.(if there is an existing environment, please ignore it)

- 1) Unzip adb-tool.zip and place it in the root directory of the computer's C drive.
- 2) Open the computer "Settings"->"System"->"About"->"Advanced system settings",

select "Environment Variadles".

Settings	1	- a ×
A 11-11-1	About	
	About Your PC is being monitored and	This page has a few new settings
Princip 2	protected.	Some setting: from Control Panel have moved here, and you can copy
system	See details in Windows Security	your PC info so it's easier to share.
Display	Device specifications	Related settings
40 Sound	Device name DESKTOP-EKA9HER	BitLocker settings
Notifications & actions	Processor Installed RAM	Device Manager
ال Focus assist	Product ID	Remote desitop
🔿 Power & sleep	System type 64-bit operating system, x64-based processor Pen and touch No nen or touch input is available for this diselaw	System proutsuon Advanced system settings
D Battery	Copy	Rename this PC (indvinced)
📼 Storage	Provide All P	
Tablet	rename ons rc.	Get help Grive feedback
Hi Multi-tasking	Windows specifications	
Projecting to this PC	Edition Windows 10 Pro Version 21H2	
	Installad on 2024 K.M	
System Properties		X
	Adversed on the part of the part	
Computer Name Hardy	vare Advanced System Protection Remote	
You must be logged o	n as an Administrator to make most of these changes.	
Performance		
Visual effects, proce	essor scheduling, memory usage and virtual memory	
	Settings	
User Profiles		
Desktop settings re	lated to your sign-in	
	Sattings	
	Settings	
Start up and Booovo	pr	
Start-up and Recove	ly	
System start-up, sys	stem failure and debugging information	
	Settings	
	Environment Variables	
	Environment Valiables	
	OK Cancel Apply	

3) Under "system variables", select "Path"->"Edit", add the path of adb-tool, and click

"ok" to save the settings when finished.



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er variables for Auffillistrate		Edit environment variable	
Variable	Value		
OneDrive	C:\Users\Administrator\OneDrive	%SystemRoot%\system32	New
Path	C:\Users\Administrator\AppData\Local\Microsoft\WindowsApps;	%SystemRoot%	
TEMP	C:\Users\Administrator\AppData\Local\Temp	%SystemRoot%\System32\Wbem	Edit
TMP	C:\Users\Administrator\AppData\Local\Temp	%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\	Luit
		%SYSTEMROOT%\System32\OpenSSH\	Descusa
		C:\Program Files\Lenovo\Bluetooth Software\	Browse
		C:\Program Files\Lenovo\Bluetooth Software\syswow64	
		C:\Program Files\PuTTY\	Delete
		C:\adb-tool	
	New Edit Delete		
		* 	Move Up
stem variables			
Variable	Value		Move Dow
	Value		-
US Dath	Windows_N1		-
Path	C:\Windows\system32;C:\Windows\System32\Wbe		Edit text
	COM; EAE; BAT; CMD; VBS; VBE; JS; JSE; WSF; WSF; INSC		
	AMD04		-
	Intel64 Family 6 Model 142 Stepping 9, Genuineintei		-
PROCESSOR_LEVEL	0-00		-
PROCESSOR_REVISION	oeog		-
esivioouleeann	20PTOULaTITEIleS20\WINDOWSPOWErSDell\WIODUleSU:\WINDOWS\SVSf		_
	New Edit Doloto		
	Delete	ОК	Capcel
		4	

4) Environment verification. Dos window output adb to display the adb version.

/ Run		×	
	Type the name of a program, folder, document or Internet resource, and Windows will open it for you.		
Open:	cmd ~		
	This task will be created with administrative privileges.		
4	OK Cancel <u>B</u> rowse		
C:\Users\ Android I Revision Installed	Administrator>adb ebug Bridge version 1.0.39 3db08f2c6889-android as C:\adb-tool\adb.exe		
global op -a -d -e -s SERIA use -p PRODI	tions: listen on all network interfaces, not just l use USB device (error if multiple devices co use TCP/IP device (error if multiple TCP/IP L device with given serial number (overrides \$AND CT	ocalhost nnected) devices ava ROID_SERIAL	ilable))
-H -P -L SOCKE	or path ('angler'/'out/target/product/angler') ult \$ANDROID_PRODUCT_OUT name of adb server host [default=localhost] port of adb server [default=5037] T listen on given socket for adb server [defau	; lt=tcp:loca	lhost:5037]
general c devices help version	ommands: [-1] list connected devices (-1 for show this help message show version num	long outpu	t)

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2.1.4 Step 3. Bring the board into burn mode

1) Open DriverAssitant_v4.8 folder, double-click DriverInstall.exe to install the driver.

Then open RKDevTool_Release, double-click RKDevTool.exe to open it.

> HF (F:) > ATesting rk3399-de	ebian_KKE200620-K2_hWi	1.0_2021062219200	> FR3399-deblan_RRE200620-R2_NWV1.0_20210622192000 > Android1001	Kelease >
称	修改日期	类型	大小	
bin	2021/6/22 19:20	文件夹		
Language	2021/6/22 19:20	文件夹		
Log	2021/7/1 9:17	文件夹		
🔏 AndroidTool.exe	2021/6/22 19:20	应用程序	1,152 KB	
Android开发工具手册_v1.2.pdf	2021/6/22 19:20	WPS PDF 文档	579 KB	
🗋 config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
onfig.ini	2021/6/22 19:20	配置设置	2 KB	
px3se-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
px30-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
Readme.txt	2021/6/22 19:20	文本文档	1 KB	
rk1808-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3036-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3128-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3229-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3288-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3308-config.cfg	2021/6/22 19:20	CFG 文件	6 KB	
rk3326-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3328-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	
rk3399-config.cfg	2021/6/22 19:20	CFG 文件	7 KB	

2) Connect K2-RK3399 and PC with the USB data cable , press and hold the upgrade

button, and power on the device while holding the upgrade button for 5-10s, it will prompt

"Found One LOADER Device".



镜	像	之工具 v2.61 升级固件 高約	动能		
		地址	名字	路径	
		0x00000000	loader	F:\ATesting\rk3399-debian_RKE200620	
2	~	0x00000000	parameter	F:\ATesting\rk3399-debian_RKE200620	
3	~	0x00004000	uboot	F:\ATesting\rk3399-debian_RKE200620	
1		0x00006000	trust	F:\ATesting\rk3399-debian_RKE200620	
5		0x00008000	misc	\rockdev \Image \misc. img	
6		0x0001A000	boot	F:\ATesting\rk3399-debian_RKE200620	
7		0x0002A000	recovery	\rockdev \Image \recovery. img	
3		0x0003A000	backup	\rockdev \Image \backup. img	
9		0x0004A000	oem	F:\ATesting\rk3399-debian_RKE200620	
10		0x0006A000	rootfs	F:\ATesting\rk3399-debian_RKE200620	
1		0x0076A000	userdata	\rockdev\Image\userdata.img	

3) At the same time, the PC device manager will find a Rockchip device.



2.1.5 Step 4. Flash the Debian image

1) Unzip rk3399-debian_RKE200620-k2_hwV1.1_XXXXXX.tar.gz, and select the

corresponding seven files in the Debian firmware folder.

G	7	enic	ate	ch	Shenzhen Geniate
喘芯得	如开发	支工具 v2.61			- 🗆 X
载镜	像	升级固件 高级	及功能	2	
#		地址	名字	路径	
1		0x00000000	loader	F:\ATesting\rk3399-debian_RKE200620	
2		0x00000000	parameter	F:\ATesting\rk3399-debian_RKE200620	
3		0x00004000	uboot	F:\ATesting\rk3399-debian_RKE200620	
4		0x00006000	trust	F:\ATesting\rk3399-debian_RKE200620	
5		0x00008000	misc	\rockdev\Image\misc. img	
6	$\overline{\mathbf{v}}$	0x0001A000	boot	F:\ATesting\rk3399-debian_RKE200620	
7		0x0002A000	recovery	\rockdev\Image\recovery. img	
8		0x0003A000	backup	\rockdev\Image\backup.img	
9		0x0004A000	oem	F:\ATesting\rk3399-debian_RKE200620	
10		0x0006A000	rootfs	F:\ATesting\rk3399-debian_RKE200620	
11		0x0076A000	userdata	\rockdev\Image\userdata.img	
< Load	er Ve	er : 1. 18	执行	切換 设备分区表 清空	
			没有	有发 现 改备	

2) Click the "Execute" button to start the burning, and the burning is successful as

follows.when the upgrade is complete, the box will restart automatically.

					下载Boot成功	
#		地址	名字	路径	等待Maskrom成功	
1	~	0x00000000	loader	F:\ATesting\rk3399-debian_RKE200620	测试设备开始	
2	~	0x00000000	parameter	F:\ATesting\rk3399-debian_RKE200620	测试设备成功	
3	~	0x00004000	uboot	F:\ATesting\rk3399-debian_RKE200620	校验芯片开始	
4	~	0x00006000	trust	F:\ATesting\rk3399-debian_RKE200620	役%応片成切	
5	Г	0x000080000	misc	\rockdev \Image \misc. img	 大現ビュashinio 対照アリュービュー C. cf Th	
6	~	0x0001A000	boot	F:\ATesting\rk3399-debian_RKE200620	次現Tiasninio與J 体名TDR工始	
7	Г	0x0002A000	recovery	\rockdev \Image \recovery. img	住用1007T%1 住各TDB成Th	
8		0x0003A000	backup	\rockdev\Image\backup. img	下载TDB开始	
9	~	0x0004A000	oem	F:\ATesting\rk3399-debian_RKE200620	下载TDB成功	
10	•	0x0006A000	rootfs	F:\ATesting\rk3399-debian_RKE200620	等待Maskrom开始	
11		0x0076A000	userdata	\rockdev\Image\userdata.img	等待Maskrom成功	
					测试设备开始 测试设备成功	
<		_		>	正在下载Gpt(100%)	
Load	er V	er:1.18	执行	切换 设备分区表 清空	正在下载 uboot(100%) 正在下载 trust(100%)	
			1		正在下载 boot(100%) → 正在下载 oem(100%)	
			没有	有发现设备	— 正在下载 rootfs(100%) 下载完成	

2.1.6 Step 5: Reboot and enjoy!

Remove the USB data cable, connect to the HDMI screen and power on again, the system will start normally. Wait for the system startup to complete(about 1min) and you can enjoy it.